The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHEN F. GASS and DAVID S. D'ASCENZO

Appeal No. 2007-0266
Application No. 09/929,227
Technology Center 3700

Decided: April 30, 2007

Before WILLIAM F. PATE, III, ANITA PELLMAN GROSS, and JENNIFER D. BAHR, *Administrative Patent Judges*.

PATE, III, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 1, 3, 4, 19 and 31. These are the only claims remaining in the application. We have jurisdiction under 35 U.S.C. § 134.

The claimed subject matter is directed to a woodworking machine with a detection system that detects a dangerous condition with respect to the operator.

When such a condition is detected, the machine has a brake that stops the cutting tool in approximately 3 milliseconds.

Claim 1 reproduced below is further illustrative of the claimed subject matter:

> 1. A woodworking machine comprising:
>
> a support fame;
>
> a motor supported by the frame;
>
> a cutting tool supported by the frame and moveable by the motor;
>
> a detection system adapted to detect a dangerous condition between a person and the cutting tool;
>
> a brake component adapted to engage the cutting tool, where the brake component has a ready position spaced apart from the cutting tool; and
>
> an actuator having stored energy sufficient to move the brake component from the ready position into the engagement with the cutting tool within approximately 3 milliseconds or less after the dangerous condition is detected.

The references of record relied upon by the Examiner as evidence of obviousness are:

Baur	US 3,695,116	Oct. 3, 1972
Friemann	US 3,858,095	Dec. 31, 1974
Yoneda	US 4,117,752	Oct. 3, 1978
Andreasson	US 4,653,189	Mar. 31, 1987
Bielinski	US 5,606,889	Mar. 4, 1997

Claims 1, 19, and 31 stand rejected under 35 U.S.C. § 103 as unpatentable over Yoneda in view of Friemann and Andreasson.

Claims 3 and 4 stand rejected under 35 U.S.C. § 103 as unpatentable over Yoneda in view of Friemann and Andreasson and further in view of Baur and Bielinski.

Claim 19 is further rejected under 35 U.S.C. § 103 as unpatentable over Yoneda in view of Friemann.

An obviousness double patenting rejection of claim 19 has apparently been withdrawn by the Examiner as it is not mentioned in the Examiner's Answer.

Appellants also rely on a Declaration by Dr. David A. Turcic. We have carefully considered this evidence during our review of the rejections on appeal.

ISSUE

The sole issue for our consideration on appeal is whether the Examiner has established the prima facie obviousness of claims 1, 3, 4, 19, and 31.

FINDINGS OF FACT

Yoneda discloses an emergency system for stopping a band blade on a band saw. Yoneda discloses a support frame including arm 23 and base 24, a motor 10 supported by the frame, band saw blade 14 moveable by the motor and supported by the frame via pulleys 11, 12, and 13, and a detection system, shown in Fig. 5, connected to the blade by a bearing 16 made of conducting material. Yoneda discloses two brakes for stopping the saw. The first is a clamp brake 20 mounted on the frame, and the second is an electromagnetic brake B provided on pulley 11. Yoneda does not disclose using stored energy to move the the brake components, and Yoneda is silent with respect to how long it would take to stop the band saw blade.

Friemann discloses another band saw for use in cutting fabric. Friemann has a frame 10, 11, and a saw blade 5 that rotates on the frame via four pulleys 6, 7, 8, and 9. A motor M is provided to rotate the saw blade. Contact rollers 12 are provided for sensing a change in the capacitance in the saw blade that indicates the proximity of the operator. The operator's touch unbalances a bridge circuit and ensures a rapid braking of the motor M and the saw blade. At various locations in the disclosure Friemann says that the blade can be stopped in 5 milliseconds or 10 milliseconds.

Andreasson discloses a chain saw provided with an electromechanical chain brake. The chain brake is energized by an electromagnetic with a current from a capacitor. The capacitor is charged by the magnetic ignition system of the chain saw motor whenever the chain saw motor is operating at an RPM higher than a threshold value.

Baur and Bielinski have been cited to show actuators that are severable when provided with high electrical currents.

PRINCIPLES OF LAW

"Enablement requires that 'the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation.'" *Elan Pharms., Inc. v. Mayo Found.*, 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003) (remanding the case to the district court for a determination of whether the prior art reference enabled persons of ordinary skill to make the invention without undue experimentation)(citing *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301, 64 USPQ2d 1270, 1278 (Fed. Cir. 2002) and *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1369, 52 USPQ2d 1129, 1134 (Fed. Cir. 1999)("Whether undue experimentation would have been required to make and use an invention, and thus whether a

disclosure is enabling under 35 U.S.C. §112, Para. 1, is a question of law that we review de novo, based on underlying factual inquiries that we review for clear error.")).

The factual premises of the enablement analysis were addressed in *In re Wands,* 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988), the court explaining that determination of whether the requisite amount of experimentation is undue may include consideration of:

> (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

See Amgen, Inc. v. Chugai Pharm. Co., 727 F.2d 1200, 1213, 18 USPQ2d 1016, 1027 (Fed. Cir. 1991) (stating that the *Wands* factors are illustrative, not mandatory and that what is relevant to an enablement determination depends upon the facts of the particular case).

Furthermore, "[w]hether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations. *Wands,* 858 F.2d at 737, 8 USPQ2d at 1404.

"A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the pertinent art." *In re Kahn,* 441 F.3d 977, 985, 78 USPQ2d 1329, 1334-35 (Fed. Cir. 2006) (citing 35 U.S.C. § 103(a) (2000)); *Graham v. John Deere Co.,* 383 U.S. 1, 13-14, 148 USPQ 459, 467 (1966). "The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of

fact." *Id.* (citing *In re Dembiczak,* 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999)).

"In assessing whether subject matter would have been non-obvious under § 103, the Board follows the guidance of the Supreme Court in *Graham v. John Deere Co.* [383 U.S. at 17, 148 USPQ at 467.] The Board determines 'the scope and content of the prior art,' ascertains 'the differences between the prior art and the claims at issue,' and resolves 'the level of ordinary skill in the pertinent art.'" *Id.* (citing *Dann v. Johnston,* 425 U.S. 219, 226, 189 USPQ 257, 261 (1976)) (quoting *Graham,* 383 U.S. at 17, 148 USPQ at 467). "Against this background, the Board determines whether the subject matter would have been obvious to a person of ordinary skill in the art at the time of the asserted invention." *Id.* (citing *Graham,* 383 U.S. at 17, 148 USPQ 467).

ANALYSIS

As an initial matter, we note that Appellants' arguments are based to a large extent on the Declaration from Dr. Turcic. We have reviewed the Declaration and find it to be legally insufficient for two reasons. As noted above in our "PRINCIPLES OF LAW" section, enablement requires that the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation. The Declaration by Dr. Turcic does not even mention undue experimentation, nor does it discuss the so-called *Wands* factors. As such, the Declaration is legally insufficient to support an argument that the Friemann reference lacks enabling disclosure.

Secondly, as our case law quotation makes clear, the issue to be established is whether the reference is enabled to one of ordinary skill without undue experimentation. However, as shown in paragraph 8 and paragraph 26 of the Declaration, the evidence by Dr. Turcic is based on his own personal knowledge

rather than the knowledge possessed by one of ordinary skill in the art. This is a second reason why the Declaration does not establish that the Friemann reference is not an enabling disclosure.

Before turning to the obviousness rejection, we make one other point dealing with the scope of the claimed subject matter. The Friemann reference discloses that the saw blade can be stopped within 5 milliseconds or within 10 milliseconds. This is the time that it takes to *stop* the saw blade. Appellants' claims are directed to the time it will take to move the brake component into engagement with the cutting tool. The claims are silent with respect to stopping the blade. Claim 31 is even more distinguishable from the 5 milliseconds of Friemann in that in claim 31 the actuator starts moving the component within 3 milliseconds. Thus, as claimed, it may indeed take an additional 2 milliseconds to stop the blade, if moving the brake started at 3 milliseconds. The point is that Friemann completely stops the blade in 5 milliseconds, whereas, as claimed, Appellants only start the stopping process within 3 milliseconds. Thus, the Examiner's argument that the 3 millisecond and 5 millisecond time periods are substantially similar is well taken.

Despite the foregoing, however, we reverse the rejections of the claims on appeal. In our view, the Examiner has not cited any prior art that shows an actuator having stored energy sufficient to move the brake component to stop the saw band disclosed in Friemann. We are in agreement with Dr. Turcic that it takes substantial energy to stop the band brakes of Yoneda and Friemann. Any capacitors in the circuitry of Yoneda and Friemann are merely electronic components and do not store energy to move the respective actuators. With respect to Andreasson, we acknowledge that Andreasson uses a capacitor to energize the electromagnetic saw brake. However, the amount of energy to stop a

band saw band within Friemann's disclosed time frame appears to be orders of magnitude more than the Andreasson capacitor can store.

Secondly, we find no suggestion or motivation for placing the capacitor of Andreasson into the safety systems of Friemann or Yoneda. Both references contemplate using electrical line power to stop their saw blades. In their installations, this power is readily available, and it is unclear why one of ordinary skill would use a giant capacitor to stop the saw blades.

Thirdly, Andreasson makes clear that the reason a capacitor is needed is that the electromagnetic ignition system is the only source of electricity available. With line power clearly available to Yoneda and Friemann, there appears to be little incentive to use a capacitor as shown in Andreasson.

CONCLUSION

For the foregoing reasons, it is our conclusion of law that the Examiner has not established the prima facie obviousness of claims 1, 3, 4, 19, and 31.

ORDER

The rejections of claims 1, 3, 4, 19, and 31 are reversed.

REVERSED

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